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RH: JWM Manuscript Guidelines • Author et al.

Journal of Wildlife Management Guidelines

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ABSTRACT These guidelines present *Journal of Wildlife Management* (*JWM*) policies and procedures for submitting, reviewing, and editing manuscripts. Beginning in 2007, peer-reviewed *Wildlife Society Bulletin* (*WSB*) articles will be combined with *JWM* articles to form the new *JWM*. These guidelines address that transition. Appendices are included for assistance in on-line submittal, standard abbreviations, Research Note submission, and assistance in formatting cited literature and tables.

KEY WORDS author, format, guidelines, instructions, manuscript, policy, style.

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Please note that the format of manuscripts submitted for review differs from the printed format of published manuscripts. As of January 2007, *Journal of Wildlife Management* (*JWM*) and the *Wildlife Society Bulletin* (*WSB*) will have merged to create the new *JWM*. Submit peer-reviewed manuscripts to *JWM*, and submit peer-edited articles to *The Wildlife Professional*, which will be received as a The Wildlife Society (TWS) member benefit. Please contact the Editor-in-Chief of the *Wildlife Monographs* for specific instructions for contributions to that publication.

Publishing a professional paper proceeds most smoothly if authors understand the policy, procedures, format, and style of the outlet to which they are submitting a manuscript. These instructions supersede all previous guidelines. Papers that clearly deviate from this format and style may be returned for correction before review. We hope these guidelines will make that unnecessary.

These Guidelines apply to all *JWM* submissions. For authors with experience and knowledge of previous *JWM* or *WSB* guidelines, it may be helpful to identify and review significant changes. Fundamental changes include: 1) a submission section that outlines the electronic submission process, 2) an equation box section that specifies acceptable in-text equation box use, 3) detailed instructions about online references, and 4) unified formatting for **LITERATURE CITED.** Please review this document for many additional minor changes.

POLICY

Reviewers and editors judge each manuscript on data originality, concepts, interpretations, accuracy, conciseness, clarity, appropriate subject matter, and contribution to existing literature. Prior publication or concurrent submission to other refereed journals precludes review or publication in *JWM* (see additional information in the **SUMBISSION PROCESS** section below). Fisheries manuscripts are discouraged unless information is part of an account that

mainly concerns terrestrial vertebrates.

SUBMISSION PROCESS

The *JWM* only accepts manuscripts submitted electronically via AllenTrack (AT). You can register for an account (which will give you a homepage in AT), log in to an existing account, submit a manuscript or review, and track the progress of your manuscript at http://jwm.allentrack.net/. Before submitting a manuscript, see Appendix A for instructions on how to use AT.

Each publication is managed by an Editor-in-Chief (EIC). Include a letter of transmittal directed to the EIC indicating that your manuscript is submitted for exclusive consideration by *JWM*. Without the exclusive consideration statement, the EIC will not initiate review. The statement ensures that data and findings have not been published previously or submitted elsewhere for simultaneous consideration. A paper is considered published if it 1) appears in a serial publication abstracted by *Biological Abstracts* or a similar reference volume, 2) appears in a book (including conference proceedings) printed in >500 copies and widely distributed to libraries, or 3) has been published as part of a numbered series by an agency. Guidelines for previous publication are flexible in certain instances, such as technical analyses of findings published previously for lay audiences. Kendall (1981) elaborated on the seriousness of dual publication, and *JWM* subscribes to these standards.

If any portion of the manuscript has been published or reported elsewhere, explain all similarities between information in the manuscript and the other publication, and furnish a citation of such publications or manuscripts. Theses (M.S.) and dissertations (Ph.D.) do not constitute prior publication and need not be mentioned in the cover letter, but they should be cited in the manuscript (see **Citing Literature in Text** below). Similarly, brief abstracts of talks given at meetings do not constitute prior publication. Generally, unpublished reports required by

sponsors and not distributed as part of a numbered series (or in other ways that might result in accession by libraries) do not constitute prior publication. Most symposia proceedings are considered publications; however, the EIC may decide these resources on a case-by-case basis. Provide information that bears on ethical and copyright considerations (CBE Style Manual Committee 1994:599–600) and other information that might facilitate review and editing.

PAGE CHARGES

Page charges are mandatory and the submitting author is required to acknowledge that s/he accepts responsibility for page charges should the manuscript be accepted for publication. Page charge waivers are at the discretion of the EIC and must be requested before submittal. Waivers will be granted to TWS members only. The fee to print color images is $650/color plate as of May 2006; this fee will be invoiced prior to production of page proofs.

COPYRIGHT

If a manuscript not in the public domain is accepted for publication, authors or their employers must transfer copyright to TWS. Publications authored by federal government employees are in the public domain. Manuscript submission implies entrusting copyright (or equivalent trust in public-domain work) to the Editor until the manuscript is rejected, withdrawn, or accepted for publication. If accepted, TWS retains copyright.

SUBJECT MATTER

The *JWM* publishes manuscripts containing information from original research that contributes to the scientific foundations of wildlife management. Suitable topics include the results and interpretations of investigations into the biology and ecology of wildlife that can be used for management. The *JWM* papers also address theoretical and conceptual aspects of wildlife management, including development of new approaches to quantitative analyses,

modeling of wildlife populations and habitats, and other topics that are germane to advancing the science of wildlife managements. Methods and techniques papers are suitable for *JWM* only if they address new research methods and techniques that pertain to wildlife management and science. We accept submissions to the following sections:

1. *Research*. These articles describe the effects of specific practices or policies on populations of animals or plants. Examples include 1) effects of agriculture, livestock, forest, or range management practices; 2) effects of practices directed toward wildlife or its habitat, such as supplemental feeding, food plots or food plantings, cover plantings, prescribed burning, brush or tree-canopy reduction, soil disturbance, and habitats created by humans; 3) methods of reducing damage caused by wildlife, including translocation, aversive conditioning, population reduction, chemicals, scare devices, and related practices; 4) tests of harvest regulations or procedures or effects of harvest management on populations; and 5) effects of private or governmental policy on wildlife. We accept 2 types of Research submissions:
    - *Articles*. These articles are generally 25–40 pages including tables and figures. All Research Articles must include the following sections: abstract, introduction, study area, methods, results, discussion, management implications, acknowledgments, and literature cited.
    - *Notes.* These articles are generally 10–25 pages including all tables and figures. Research Note abstracts are 1 line per 2 pages of text, including literature cited. The headings for Research Notes are as follows. 1) First-level headings: Study Area, Methods, Results, Discussion, and Literature Cited. 2) Second-level headings: Management Implications and Acknowledgments. No additional

subheadings are allowed.

2. *Management and Conservation*. These articles deal with administration of wildlife programs or agencies; methods, examples, and application of administrative policy or policy development; local, state, or regional planning; and related topics. Articles also discuss resource economics, cost effectiveness of management programs or practices, economic values of wildlife or outdoor experiences, and related topics.
3. *Human Dimensions of Wildlife Management*. These articles discuss sociology, values, attitudes, perceptions, and psychology of natural resource stakeholders and managers. Contributions on political or legal issues, special topics in wildlife management, environmental impacts, refinement of state or federal natural resource programs or policies, regional or national surveys of wildlife management programs or policies, social movements affecting wildlife management, and related topics are welcomed. These articles also address the principles, logic, and ethics under which wildlife managers and the profession operate. These articles may also address education of natural resource stakeholders, hunter education, university curricula, and related topics.
4. *Techniques and Technology*. These manuscripts report a significant evaluation of, or improvement upon, techniques used frequently in management (e.g., counting or surveying populations to determine effects of management; sexing, aging, capturing, and handling wildlife). We also welcome manuscripts that provide a description of computer software that has application to wildlife management and research.
5. *Student Voices.* These articles discuss issues of particular relevance to students within the natural resources field or are award-winning or otherwise outstanding student-authored essays.

6. *Commentary*. These articles are essays that question values, priorities, precepts, and philosophical foundations under which wildlife management operates. These articles can uncover dogma, false assumptions, and misguided policy or stimulate thought and innovation. Commentaries are in response to an issue, movement, policy, or program that could impact wildlife or its habitat. The manuscript must be well documented and prepared professionally. The purpose of this feature is to get important information in print in a timely fashion. The Editor-in-Cheif may appoint a peer-editor or accept Commentary essays without peer-review.
7. *Letter to the Editor*. The Editor-in-Chief has the option to solicit invited papers that review and synthesize important topics that pertain to the scientific foundations of wildlife management. However, we encourage anyone to contact the Editor-in-Chief with potential topics and author(s). Invited Papers must include a management implications section, are not necessarily subject to peer review, and are not subject to page charges.
8. *Book Reviews.* Book reviews provide a brief synopsis and commentary on a book relevant to some aspect of the natural resources field.
9. *Obituaries.* All obituaries should be submitted directly to the Executive Director, The Wildlife Society, 5410 Grosvenor Lane, Bethesda, MD 20814 (tws@wildlife.org). Obituaries are published only for members of The Wildlife Society, with few exceptions. All obituaries must be approved by the Executive Director prior to submission to the Editor.

Replication of Treatments

Hurlbert (1984) pointed out that field researchers have frequently misused inferential

statistics because treatments were not replicated. However, because of the nature of field research, true replication sometimes will not be feasible. Guthery (1987) presented guidelines for authors and reviewers of manuscripts based on unreplicated treatments.

FORMAT AND STYLE

Manuscripts must adhere to *JWM* guidelines before they will be approved and sent out for review.

Length of Articles

The *JWM* considers articles of any length not likely to exceed 15 pages in print (about 35 manuscript pages [double-spaced, 12-point font], including tables and figures). Submit articles of >35 typed pages to *Wildlife Monographs*.

Page Format

We accept text and table files in the following formats: Word, html, and rtf. We accept figure files in the following formats: pdf, eps, jpeg, tiff, Postscript, Word, and PowerPoint. Do not submit files in Word Perfect, including equations that were not created within the standard Word template.

General guidelines:

1. Double space all text, including title, authors' addresses, text, long quotations within text, literature citations, table footnotes, table titles, table bodies, and figure titles.
2. Do not break (hyphenate) words on the right margin.
3. Do not justify the right margin.
4. Use Times New Roman font, 12-point type throughout the manuscript, including title and headings.
5. Italicize words or symbols, such as scientific names and mathematical symbols that

should appear italicized in print.

6. Do not use italic or boldface type for emphasis.

7. Maintain margins of 2.5 cm (1 inch) on all sides of the page.

Title Page: Running Head, Title, and Authors

The following guidelines apply to all text files. On page 1 single-space the following information in the upper left corner: date (update with each revision) and the corresponding author's name, address, telephone, fax, and e-mail (as in this document). Thereafter, double-space all text including authors' addresses, the title of the paper, figure legends, and tables. If the corresponding author's email address changes following submission of the manuscript, update the user profile on the AT website, and notify the editorial staff.

Type the running head (RH) on the first line following the correspondent's address. The RH is limited to 45 characters. Left-justify the RH and capitalize each important word (e.g., "Implanting Transmitters in Snakes"). The RH is followed by a dot (or raised period) and the last name(s) of ≤2 authors. For ≥3 authors, use the name of the first author followed by "et al." (e.g., Foster et al.).

The title follows the RH and is centered in bold font, sentence-case letters, with important words capitalized as in the RH. The title identifies manuscript content and may not include abbreviations, acronyms, or punctuation. Titles should not exceed 10 words unless doing so forces awkward construction. Do not use scientific names in the title except for organisms that do not have, or are easily confused by, common names. Do not use numbers in titles or the RH.

Authors' names are left-justified in sentence-case letters following the title. Each name is followed by the author's affiliation and address (usually where the author was employed during the study) also in sentence-case letters. Indent the second and subsequent lines of an author's address 5 spaces using the hanging indent function. In each address, use available U.S. Postal Service (USPS) abbreviations, zip codes, and the country (abbreviate "USA," but spell out all others). See the following websites for USPS abbreviations: http://www.usps.com/ncsc/lookups

/abbreviations.html#states and http://canadaonline.about.com/library/bl/blpabb.htm. Write out words like Street, Avenue, and Boulevard, but abbreviate directions (e.g., N. and N.W.). For multiple authors with the same address, repeat the address after each author's name.

Footnotes

Insert footnotes using the footnote function. Footnotes may only be used to note an author's email address, to reference the present address of an author when it differs from the byline address, and to indicate a deceased author. Each footnote starts with a numerical superscript. Incorporate endorsement disclaimers and pesticide warnings in the text. For information on table footnotes, see the **Tables** section.

Abstract

Begin with the word "**ABSTRACT**" (left-justified) in bold font. The abstract text begins after a regular letter space on the same line and is a single paragraph not exceeding 1 line per page of text (3% of length of text), including **LITERATURE CITED**. Research Note abstracts cannot exceed 1 line per 2 pages, including **LITERATURE CITED**. The abstract includes:

Problem studied or hypothesis tested. Identify the problem or hypothesis and explain why it is important. Indicate new data, concepts, or interpretations directly or indirectly used to manage wildlife.

Pertinent methods. State methods used to achieve the results summarized in the **RESULTS** (keep the methods brief unless a new, greatly improved method is reported).

Results. Emphasize the most important results, positive or negative.

Utility of results. Explain how, when, where, and by whom data or interpretations can be applied to wildlife problems or contribute to knowledge of wildlife science.

Key Words

Key words follow the abstract. The phrase "**KEY WORDS**" (left-justified, typed in bold font) is followed by a regular space and ≤10 key words in alphabetical order, ending with a period. Include some words from the title and others that identify: 1) common and scientific

names of principal organisms in the manuscript; 2) the geographic area, usually the state, province, or equivalent, or region if its name is well known; 3) phenomena and entities studied (e.g., behavior, populations, radiotelemetry, habitat, nutrition, density estimation, reproduction); 4) methods (only if the manuscript describes a new or improved method); and 5) other words not covered above but useful for indexing.

Text Pages

Using the Header function, place author name(s) (e.g., Smith, Smith and Jones, Smith et al.) in the upper left corner of all pages following the title page. Place page numbers in the upper right corner. These notations help keep the manuscript sections together during reviewing, editing, and typesetting. Number each line of the text continuously (i.e., do not restart numbering on each page).

Headings

Examples of the 3 heading types follow:

1. First-level heading: upper-case lettering, bold type, and flush left. Text follows flush left on the succeeding line. For example:

STUDY AREA

2. Second-level heading: bold type, left-justified, with important words capitalized. Text follows flush left on the succeeding line. For example:

Burrow Availability Hypothesis

3. Third-level heading: indented 5 spaces, italicized, and followed by a period and em dash. Text follows directly after the heading on the same line. For example:

Assessment of available natural burrows.— Begin paragraph text here.

Under a first-level heading, use only third-level headings if the subsections are short (≤2 paragraphs; see **Abstract** section above for an example). Avoid repeating exact wording of the heading in the text following second- and third-level headings. Use first-level heading for

appendix titles.

Major Sections of Manuscript

The introduction (no heading) starts below the publication name and contains a concise synthesis of literature specific to the manuscript's main topic. In the latter part of this section, state the objectives of the study and the hypotheses tested.

Most *JWM* manuscripts have 8 major sections: introduction (no heading), **STUDY AREA**, **METHODS, RESULTS, DISCUSSION, MANAGEMENT IMPLICATIONS, ACKNOWLEDGMENTS,** and **LITERATURE CITED**. It is not permissible to combine **STUDY AREA** and **METHODS** or **RESULTS** and **DISCUSSION**. Merging these sections leads to superfluous wording, unnecessary discussion, and confusion.

Use past tense for **STUDY AREA** descriptions (e.g., "average annual precipitation was 46 cm," "habitat was primarily grass"). Exceptions include geological formations that have been present for centuries (e.g., mountains). **METHODS** should be brief and include dates, sampling schemes, duration, research or experimental design, and data analyses. Write the **METHODS** in the active voice (i.e., write "We recorded age, sex, and mass..." and "We analyzed data using logistic regression," rather than "Age, sex and mass were recorded" or "Logistic regression was used"; see **STYLE AND USAGE** section below). Cite previously published methods without explanation. Identify new or modified methods and explain them in detail. Include animal-welfare protocols in the **METHODS** section (not in **ACKNOWLEDGMENTS**). If an approval number for the protocol was necessary, list it parenthetically following the relevant statement.

Present **RESULTS** in a clear, simple, concise, and organized fashion. Avoid overlapping text with information in tables and figures; do not explain analyses that should have been described in the **METHODS** section. Always try to describe the magnitude of the biological effect in addition to the results of statistical analyses. That is, terms such as "fewer" or "smaller" tell us little, and stating that something was "statistically different ($P < 0.01$)" without giving the actual difference conveys little meaning to the reader. For example, stating that "*A* was 25%

larger than *B* ($P < 0.001$)" conveys more information than simply stating that "*A* was significantly larger than *B*." Present **RESULTS** in past tense (e.g., body mass loss occurred during winter). Reserve comments on interpretation of results for the **DISCUSSION**.

The **DISCUSSION** provides an opportunity for interpreting data and making literature comparisons. Begin the **DISCUSSION** by synthesizing your results with regard to your objectives and then relate your work to other literature and research. Systematic discussion of every aspect of research leads to unnecessarily long manuscripts; be concise and relate your findings directly to your overall project goal, objectives, and hypotheses as appropriate. Reasonable speculation and new hypotheses to be tested may be included in the **DISCUSSION**. Do not repeat results in this section, and comment on only the most important results.

The **MANAGEMENT IMPLICATIONS** section should be short (usually about one paragraph) and direct but explain issues important to management and conservation that are derived directly from your results. Do not restate material from the **RESULTS** or **DISCUSSION** sections, and do not make recommendations that are beyond the scope of your study. Address specific management opportunities or problems in this section.

The **ACKNOWLEDGMENTS** (note preferred spelling) section appears immediately before **LITERATURE CITED**. This section should be brief and include initials (rather than first names) of individuals cited. **ACKNOWLEDGMENTS** should be straightforward without ornate and qualifying adjectives or personal remarks. For example: "We thank G. A. Baldassarre, M. Boyce, C. E. Braun, H. E. Hodgdon, R. L. Lee, and M. Kirsch for review comments and contributions to this manuscript. G. C. White assisted with revision of the mathematics and statistics subsection. Portions of this manuscript have been extracted from Ratti and Ratti (1988) and Gill and Healy (1980) with permission of The Wildlife Society. This is Contribution 836, University of Idaho Forest, Wildlife, and Range Experiment Station. L. M. Smith was supported by the Caesar Kleberg Foundation for Wildlife Conservation."

Literature Cited

See Appendix B for detailed instructions on how to format citations. Maintain double-spacing and use hanging indents (rather than blank lines) to differentiate between citations. Present citations within the manuscript in chronologic order and then alphabetic order. Present citations within the **LITERATURE CITED** section in alphabetic order and then chronologic order. At the end of the **LITERATURE CITED** section type "*Associate Editor:*" (the name of the Associate editor [AE] will be filled in later).

Figure Legends and Tables

On a new page following the **LITERATURE CITED,** compile figure captions (not figures), table tiles, and tables. Submit figures as a separate file(s). Note that although AT provides spaces to enter figure and table captions, these captions do not carry over to the merged file; they are for on-line reviewing only.

Appendices

Include appendices in the text file after all tables and figure captions. Use first-level headings for Appendix titles.

FORMAT FOR COVER ART SUBMISSIONS

Submit cover art only after your manuscript has been accepted for publication. If you have a photo that you would like us to consider, please email your photo as an attachment to jwm@wildlife.org. We prefer EPS or tif files, and jpg files must be the highest resolution (minimum of 300 dpi). Submissions must be pre-sized to 8 1/2 × 8 1/2 or larger. If your photo is selected for cover art, you will need to complete a signed release form.

STYLE AND USAGE

Manuscripts with publishable data may be rejected because of poor writing style (e.g., long and complex sentences, superfluous words [Table 1], unnecessary information, and poor organization). Most editors are patient with this problem and are willing to offer helpful suggestions. However, reviewers may be less tolerant of poor writing, and this may result in

negative reviews. Many problems can be corrected by having your manuscript critically reviewed by colleagues before submission for publication. We urge authors to review chapters 3 and 4 in the "CBE Style Manual" (CBE Style Manual Committee 1994) and "Writing with Precision, Clarity, and Economy" (Mack 1986). Use a direct and concise writing style and minimize repetition among different sections of your manuscript. Avoid using 1-sentnece paragraphs. Many common problems may be avoided by use of a carefully prepared outline to guide manuscript writing. Other helpful suggestions are presented by Strunk and White (1979), Day (1983), and Batzli (1986).

The most common error in manuscripts is use of passive voice. Use first person and active voice throughout the manuscript to avoid superfluous or unclear wording. For example, instead of writing "false absences were estimated" write, "we estimated false absences." Review the list of commonly misused words (Table 2) before preparing your manuscript.

Do not hyphenate words at the right margin, and do not right-justify text. Set margins at 2.5 cm (1 inch) on all sides. Do not violate margin boundaries to begin a new paragraph or to place the **LITERATURE CITED** at the top of a new page (i.e., do not leave >2.5 cm of space at the bottom of a page except to prevent a widow heading). Do not underline words in the text to indicate emphasis. Type scientific names in italic font and type Latin phrases in plain type (e.g., post hoc, a priori).

Numbers and Unit Names

Use digits for numbers (e.g., 7 and 45) unless the number is the first word of a sentence or is used as a pronoun (e.g., at least one escaped), in which case the number is spelled out. Use symbols or abbreviations (e.g., % and kg) for measurement units that follow a number unless the number is indefinite (thousands of hectares), is a "0" (zero) standing alone, or is the first word in a sentence. In such cases spell out the number and unit name or recast the sentence. Avoid using introductory phrases such as "A total of ...." Spell out ordinal numbers (e.g., first, second)

in text and literature cited, but use digits for cases such as 3-fold and 2-way. Convert fractions (1/4, 1/3, etc.) to decimals except where they misrepresent precision.

Hyphenate number-unit phrases used as adjectives (e.g., 3-m^2 plots and 3-yr-old males) but not those used as predicate adjectives (e.g., plots were 3 m^2, males were 3 yr old). Insert commas in numbers ≥1,000 (except for pages in books, clock time, or year dates). Do not insert a comma or hyphen between consecutive, separate numbers in a phrase (28 3-m^2 plots). Do not use naked decimals (i.e., use 0.05, not .05). When identifying items by number, use lowercase for names (e.g., plot 1, site 5, day 3).

Time and Dates

Use the 24-hour system: 0001 through 2400 hours (midnight). Date sequence is day month year, without punctuation (e.g., 4 March 2000). Do not use an apostrophe for plural dates (e.g., 1970s). Spell out months except in parentheses, table bodies, and figures, in which 3-letter abbreviations are used with no period (e.g., 31 Mar 1947).

Mathematics and Statistics

Use italic font for Roman letters used as symbols for quantities (e.g., n, $\bar{x}$, F, t, Z, P, and X; Appendix C). Do not underline or italicize numbers, Greek letters (e.g., chi-square, χ^2), names of trigonometric and transcendental functions, or certain statistical terms (e.g., ln, e, exp, max, min, lim, SD, SE, CV, and df). Degrees of freedom used in a statistical test may be reported either as subscripts to the relevant test statistic ($F_{1,14} = 6.84$) or following it ($F = 6.84$, df = 1,14). Use bold font for items that should be set in boldface type. Insert symbols from your word processing program's symbol directory as opposed to creating the symbol with keyboard functions (e.g., chi-square should appear as χ^2 [found in the symbol directory], as opposed to X^2 [created with keyboard functions]). Use the minus sign from the symbols menu (−) to indicate minus and negative values instead of using the keyboard hyphen. Use times (×) to indicate

multiplication instead of using an asterisk (*) or a lowercase x.

Insert a space on both sides of symbols used as conjunctions (e.g., $P > 0.05$), but close the space when symbols are used as adjectives (e.g., >20 observations). Where possible, report exact probabilities ($P = 0.057$, not $P > 0.05$). A subscript precedes a superscript (X_i^3) unless the subscript includes >3 characters. Break long equations for column-width printing (67 mm) if they appear in the main body of the manuscript; long equations and matrices can be printed page-width (138 mm) in appendices. Follow Swanson (1974) or the CBE Style Manual Committee (1994:206–218) for general guidance, and follow MacInnes (1978) for advice on presentation of statistics. Type the names of statistical programs or analytical methods (that are not acronyms) in capital letters (e.g., PROC LIFEREG, POPGEN, Program MARK). See Appendix B for instructions on how to cite statistical software packages. We urge authors to read Tacha et al. (1982) and Wang (1986) for reviews of common statistical errors. Consider statistical power when judging results (*JWM* 59:196–198).

Avoid redundant use of the word "significantly" (e.g., "the means differed [$P = 0.016$]"). Report results of statistical tests or central tendency as in the following examples: ($t_1 = 2.47$, $P = 0.013$), ($F_{3,12} = 33.10$, $P = 0.01$), ($\chi^2_{10} = 22.1$, $P = 0.029$), or ($\bar{x} = 7.8$, SE = 3.21, $n = 46$). Note that the appropriate degrees of freedom are subscripted with the test statistic. Present *P*-values less than 0.001 as $P \leq 0.001$.

Equations

Equations require precise internal spacing and formatting, and are most easily correctly constructed with MathType software. Simple mathematical expressions, such as symbols with simple subscripts or superscripts and Greek letters can be typed as text, using the symbol directory. However, care must be taken to be sure that the font and font size are the same wherever the symbol is used, and inconsistencies can arise when text symbols are mixed with

symbols generated with MathType. For example, the Greek letter phi can be represented by both φ and ϕ, which leads to confusion when both appear in the manuscript but are to imply the same symbol. Mathematical symbols for estimators are typically given "hats" (carets, e.g., $\hat{\mu}$) and require the use of the software, as does proper construction of the symbol for an estimated mean ($\bar{x}$). Submit complex equations as display equations in equation boxes: 1) characters that have hats, tildes, or other expressions that would not translate well into straight text; 2) sums, products, and similar statements; and 3) brackets around matrices and complex expressions. For in-line equations using division, use "/" instead of stacking above and below a horizontal line, and all symbols in text need to be pulled from the symbols function or Unicode. Statistical terms that are not to be italics (e.g., ln, e, exp, max, min, lim, SD, SE, CV, and df) can appear in equation boxes as text without italics by changing the style to "text" while editing the equation box.

Abbreviations and Acronyms

The following abbreviations may be used in the text without definition: metric units, DNA, USPS abbreviations, and abbreviations in Appendix C. Define all other abbreviations or acronyms the first time you use them in the abstract or text (e.g., Geographic Information System [GIS], Global Positioning System [GPS], Akaike's Information Criterion [AIC]). Reestablish acronyms in the text that were first established in the abstract. Do not start sentences with acronyms, and do not use an apostrophe with plural acronyms (e.g., ANOVAs). Use the abbreviations in Appendices B and D within parentheses.

Punctuation

Use a comma after the next-to-last item in a series of >2 items (e.g., red, black, and blue). Do not use a comma to separate a compound sentence before the conjunction unless the sentence will be confusing otherwise (e.g., "Use an infrared scope at night and use a regular scope during

the day," not "Use an infrared scope at night, and use a regular scope during the day."). Write clearly enough so that you do not need to put quotation marks around words or phrases unless they are direct quotations. Do not hyphenate prefixes, suffixes, or combining forms unless necessary to avoid confusion. Follow these 3 rules to avoid common hyphenation errors: 1) a phrase containing a participle or an adjective is hyphenated as a compound when it precedes the word modified, and it is written without a hyphen when it follows the word modified (e.g., "a small-mammal study" and "a study of small mammals" are both correct but have a different meaning than "a small mammal study"); 2) a modifier containing a number is usually hyphenated (e.g., a 6-yr-old mammal); and 3) a 2-word modifier containing an adverb ending in ly is not hyphenated (e.g., a carefully preserved specimen).

However, excessive use of compound modifiers before nouns makes for difficult reading; they tend to obscure the subject. Avoid ambiguous use of nouns as modifiers (e.g., wolf researchers, woman hunters). Use prepositions to avoid using nouns as adverbs (e.g., nesting by birds, not bird nesting; hunting with dogs, not dog hunting) and to avoid noun strings exceeding 3 words (e.g., radiotelemetry locations of dens in fall, not fall den radiotelemetry locations).

Closing quotation marks are always placed after periods and commas, but they may be placed either before or after other punctuation (CBE Style Manual Committee 1994:177–181). Fences must appear in pairs, but the sequence varies. Use ([]) in ordinary sentences, use {[()]} in mathematical sentences, and use (()) only in special cases such as chemical names. Brackets are used to enclose something not in the original work being quoted (e.g., insertion into a quotation or a translated title [CBE Style Manual Committee 1994:58–59]).

Do not use a slash (/) to indicate "and" or "or" or to express a range; use only to indicate "divided by" or "per." Avoid using words in ways other than their standard meanings; use quotation marks to imply a special meaning sparingly. Use trademarks (i.e.,™, ®) at the first mention of a product name, where appropriate, and not thereafter (if introduced in the abstract,

re-establish the information in the text). Provide manufacturer information (manufacturer, city, and state or country of manufacture) immediately following the first use of a product name.

Enumerating Series of Items

A colon must precede a series of numbered items unless the list is preceded by a verb or preposition. For presentation of a simple series, place numbers followed by a closing parenthesis only (see example in **Key Words** section) and separate phrases with commas or semicolons. When enumerating lengthy or complexly punctuated series, place the numbers at the left margin, with periods but no parentheses, and indent run-on lines (see **Measurement Units** section below).

Common and Scientific Names

Do not capitalize common names of species except words that are proper names (e.g., Canada goose [*Branta canadensis*], Swainson's hawk [*Buteo swainsoni*], and white-tailed deer [*Odocoileus virginianus*]). Scientific names follow the first mention of a common name, except in the title. If a scientific name is established in the abstract, re-establish it in the text. Place scientific names following common names in parentheses and italic font with the first letter of the genus name capitalized and the species name in lower-case letters. Abbreviate genus names with the first letter when they are repeated within a few paragraphs, provided the meaning is clear and cannot be confused with another genus mentioned in the manuscript with the same first letter; e.g., we studied snow geese (*Chen caerulescens*) and Ross' geese (*C. rossii*).

Do not use subspecies names unless essential, and omit taxonomic author names. Use "sp." (singular; not italicized) or "spp." (plural) to indicate that the identity of species within a genus was unknown; e.g., the field was bordered by willow (*Salix* sp.) and we trapped several species of mice (*Peromyscus* spp.). Use the most widely accepted nomenclature where disagreement occurs. As general references for birds, use the most current edition of The American Ornithologists' Union Check-list (e.g., 1997) and periodic supplements published in *Auk*. For mammals, use Whitaker (1996). There is no single reference for plants in North

America; we recommend citing the most widely accepted regional flora reference (e.g., in northwestern states, Hitchcock and Cronquist [1973]). Omit scientific names of domesticated animals or cultivated plants unless a plant is endemic or widely escaped from cultivation or is a variety that is not described adequately by its common name.

Measurement Units

Use Systeme Internationale d'Unites (SI) units and symbols (see Appendix C). Place a space between numbers and units or symbols (e.g., 10 m, 80° C). Do not use hyphens between numbers and units unless you are using a number-unit phrase to modify a noun (e.g., correct usage: 12-mm mesh, 3-yr study, 12 mm in diameter, and 2 mm wide; see section on Style and Usage.) Use English units (or, rarely, another type of scientific unit) in parentheses following a converted metric unit only in cases that may misrepresent: 1) the statistical precision of the original measurement or 2) the correct interpretation of the results. However, these non-SI units are permitted:

1. Area: hectare (ha) in lieu of 10^4 m^2;
2. Energy: calorie (cal) in lieu of Joule (J);
3. Temperature: Celsius (C) in lieu of Kelvin (K);
4. Time: minute (min), hour (hr), day, etc. in lieu of seconds (sec);
5. Volume: liter (L) in lieu of dm^3.

The CBE Style Manual Committee (1994:200–205) provides definitions of SI units and prefixes. The American Society of Testing Materials (1979) includes many conversion factors.

Securing Appropriate Approval(s)

It is increasingly important that scientists ensure their research activities are conducted such that the welfare of the animals they are studying (e.g., installing radiotransmitters) or the rights of human subjects (e.g., sending them a survey) is considered. Consequently, it is important that all peer-reviewed and peer-edited manuscripts submitted for publication

demonstrate that these concerns have been addressed. Include documentation in the **METHODS** section.

Animal care.—Appropriate documentation that proper animal care and use was applied when using live vertebrate animals for research must be submitted. Acceptable means of documentation include an Institutional Animal Care and Use Protocol number (as designated by most U.S. universities), the number of the permit or license issued to hold animals (such as with private breeders), or the equivalent. This policy covers all vertebrate animals, including mammals, birds, reptiles, amphibians, and fish.

Human subjects. —Appropriate documentation that proper approval was obtained to perform research involving human subjects (primarily surveys) must be provided. Acceptable means of documentation include a Human Subjects Protocol number (as designated by most U.S. universities) or the equivalent.

Citing Literature in Text

In most cases reference citations parenthetically at the end of a sentence; e.g., "Mallard brood survival was higher in the wettest years (Rotella 1992)." Cite published literature by author and year; e.g., Jones (1980), Jones and White (1981). Use "et al." for publications with ≥3 authors; e.g., (Jones et al. 1982). Do not separate the author and date by a comma, but use a comma to separate a series of citations. Use chronological order for citations in a series; e.g., (Jones 1980, Hanson 1986). If citations in a series have >1 reference for the same author(s) in the same year, designate the years alphabetically (in italics) and separate citations with semicolons; e.g., (Jones 1980*a*, *b*; Hanson 1981; White 1985, 1986). For citations in a series with the same year, use alphabetical order within chronological order; e.g., (Brown 1991, Monda 1991, Rotella 1991, Allen 1995). Do not give >5 citations in the text to reference a specific issue or scientific finding. For a quotation or paraphrase, cite author, year, colon, and page number(s);

e.g., “We used Neyman allocation to minimize variance (Krebs 1989:216).” Use the same style for a book or other lengthy publication unless the reference is to the entire publication; e.g., Odum (1971:223).

Cite documents that are cataloged in major libraries, including theses and dissertations, as published literature. This includes symposia proceedings and United States Government reports that have been widely distributed. However, cite such references as unpublished if they are not easily available. Cite all other documents as unpublished data in the text only.

Citing Unpublished Sources in Text

If references are not easily available or are not widely distributed, cite them in the text only. This includes reports that are not published or widely distributed, manuscripts that have not yet been accepted for publication, and personal communications and observations. Avoid overusing unpublished information. These citations are not as credible as published literature and will make your text cumbersome. Cite unpublished references in the text as follows:

1. Personal communications: (J. G. Jones, National Park Service, personal communication);
2. Unpublished report: (D. F. Timm, Alaska Department of Fish and Game, unpublished report). Or (E. J. Jones, North Carolina State University, unpublished report);
3. Unpublished data (including manuscripts in review): (D. F. Brown, Arizona Game and Fish Department, unpublished data).

Note: Abbreviate state names in parentheses (Appendix A) except when they appear in the title of an academic institution or agency. Always include the affiliation in the first citation, even if citing unpublished data or personal observation of one of the authors, but do not repeat the affiliation in subsequent references (e.g., J. G. Jones, personal communication).

A manuscript accepted for publication is cited as a published manuscript in the text using the anticipated publication year. In the **LITERATURE CITED** section, show the year after the

name(s) of the author(s) and "in press" after the volume number. Do not cite manuscripts that are in review; use the unpublished style listed above. Refer to Appendix B for literature cited style.

Citing Equipment and Statistical Software

For field equipment, note the manufacturer name and location parenthetically the first time you mention the equipment in the text (e.g., Interface, Missoula, MT). Do not include manufacturer information or location for GIS and GPS. For statistical software, only include the software in **LITERATURE CITED** if you are referencing the software manual. Include website access information in citations if the program is only available online.

TABLES AND FIGURES

Submit only essential tables and figures. Do not submit tables if the information overlaps with information presented in the text, can be easily printed in the text with less journal space, or presents the same data in another table and a figure. Number tables and figures independently. Do not combine multiple tables or figures on one page. In the text, limit reference of tabular data to highlights of the most important information. Reference tables and figures parenthetically (Table 1, Fig. 3) and avoid statements such as, "The results are shown in Tables 1–4." Prepare line drawings only for data that cannot be presented as clearly in a table. For general guidance see CBE Style Manual Committee (1994:677–693).

Tables and figures should be able to stand alone (i.e., be self-explanatory) and avoid reference to the text. Table and figure titles must include the species or subject of the data studied and when and where (region/state and country) the data were collected. Do not include statistics (e.g. *P*-values) or other statements of results in the titles. In rare cases, titles or footnotes of tables and figures may be cross-referenced to avoid repeating long footnotes or the same data; however, this violates the self-explanatory rule and should be avoided. Combine figure legends on a separate page and include them with manuscript text (following **LITERATURE CITED**). Include tables at the end of the text (following the figure captions or

LITERATURE CITED). Submit figures in AT as separate file(s). You may include all of your figures in one file or submit each figure file separately.

Tables

Do not prepare tables for small data sets, those containing many blank spaces, zeros, repetitions of the same number, or those with few or no significant data. Put such data or a summary of them in the text. Day (1983) presents a practical discussion of tables.

For data that must be shown in a table, items that provide the most important comparisons usually read vertically, not horizontally. Construct tables for column-width (67 mm) printing. If the table will not fit in one column width, construct it for page-width printing not wider than 23 cm (9 inches). Some extra-wide tables can be printed vertically (e.g., *JWM* 50:192, 51:461), but such tables usually waste space. Extra-long and extra-wide tables require persuasive

following standards:

1. None drawn vertically within the table.
2. Each table contains at least 3 rules – below the title, below the column headings, and at the bottom. Insert each as a single, continuous line. Do not use bold or extra-thick rules.
3. Use rules that straddle subheadings within the column heading (e.g., *JWM* 50:48).
4. None to show summation; use "Total" or equivalent in the row heading.
5. Do not use rules to join the means in multiple-range tests. Use Roman upper-case letters instead of rules (e.g., 12.3A[a], 16.2A, and 19.5B) where the superscript "a" references a footnote (e.g., "[a]Means with the same letters are not different ($P > 0.10$)"; *JWM* 50:22). Upper-case letters may be used in a similar fashion to reference the relationship of data among columns (e.g., *JWM* 50:371).
6. Use straddle rules in column headings to join related columns and reduce wordage (e.g., *JWM* 50:31). Label columns to avoid unnecessary print in the data field. For example, instead of "$\bar{x}$ ± SE," label $\bar{x}$ and SE separately so that ± need not be printed. Similarly, label sample size columns "*n*" instead of using numbers in parentheses in the data field. Keep column- and row-heading words out of the data field. Type main headings flush left, and indent their subheadings (e.g., *JWM* 50:86). For column- and row-headings, only capitalize the first word and proper nouns (e.g., No. of times detected in Nevada), and do not use bold font. In the data field, do not use dashes (often misused to mean no information) or zeros unless the item was measured, and 0, 0.0, or 0.00 correctly reports the precision (measurement). Similarly, respect digit significance in all numbers, particularly percentages. Do not use percentages where *n* is <26, except for 1 or 2 samples among several others where *n* is >25. Where the number of significant digits varies among data in a column, show each datum at its precision level (i.e., do not exaggerate precision). For *P* values only use 3 digits past the decimal, and do not list $P = 0.000$; the correct form is $P \leq 0.001$. Do not use naked decimal points in the data field (e.g., use 0.05 instead of .05).

For footnote superscripts use asterisks for probability levels and lower-case Roman (not italic) letters for other footnotes. Place letters alphabetically in the following sequence: in the title, then left-to-right, and then down. Make certain that each footnote character in the title and table matches an explanation in a footnote that is indented below the table. Left-justify run-on lines of footnotes. Use footnotes to reduce cluttering the title and table with details. The most common errors in tables are single spacing, incomplete titles, naked decimal points, and ambiguous or unnecessary characters in the data field.

Figures

Most figures are either line (or computer) drawings or pictures (picture is used to distinguish scene or object photographs from photos of drawings). If possible, photographic prints should not exceed 20 × 25 cm. Do not submit color figures unless you are able to pay for printing ($650/color plate in Jun 2006). For additional guidance, consult Allen (1977), the CBE Style Manual Committee (1994:693–699), and Day (1983).

Begin figure captions on a new page immediately following the **LITERATURE CITED**. Figure captions tend to be longer than table titles because figures are not footnoted. The caption may be several sentences and include brief suggestions for interpreting the figure content. Like table titles, figure captions should allow the figure to be self-explanatory, describing the variables displayed and where and when data were collected. Do not include statistical results in the caption. Type the label of each figure (e.g., Figure 1, Figure 2) on the page containing that figure.

Pictures.—Pictures must have sharp focus in the most important parts of the image, have high tonal contrast, and have a reference scale if size is important. Letters, scales, or pointers can be drawn on the prints, but they must be of professional quality. Sets of 2–4 related pictures can be handled as 1 figure if prints are the same width and will fit in a space 67 × <170 mm when reduced for printing, but please mount them together prior to submitting the figure. All image files must have a resolution of at least 200 dpi at final printing size. Allen Press does not

retouch or resize photos, so submit only print-quality images.

Line drawings. —Consider whether a drawing can be printed column width (67 mm) or is so detailed that it must be printed page width (138 mm). The difference depends mainly on size of characters and lengths of legends drawn on the figure. If page width is necessary, consider omitting some of the detail, and look for ways to shorten legends. Column-width figures are preferred (e.g., *JWM* 50:145).

Before revising the first sketch, determine the minimum height for letters, numbers, and other characters, which must be ≥1.5 mm tall after reduction for printing. Determine width in millimeters for the revised sketch. To determine the minimum height (mm) for characters, multiply the width by 0.0224 for column-width printing or 0.0109 for page-width printing. If in doubt as to printed width, use the column-width multiplier. The product is the minimum height in millimeters. Use at least the next larger character height available. Hand-drawn lines and lettering and typewriter characters are not acceptable. We recommend professionally prepared line drawings.

Only capitalize the first word and proper nouns on axis labels and keys. Lettering within figures follows the same guidelines as manuscript text. Use italic letters only where they are essential to the meaning, as in mathematical terms and most metric units (see **Math and Statistics** section above and Appendix C). Identify arbitrary symbols by legend within the figure (preferred) or, for those normally available to the printer (e.g., CBE Style Manual Committee [1994:693–699]), in the figure title.

REVIEW PROCESS

Upon receipt, the editorial staff examines a manuscript for proper style, format, and appropriate subject matter. If style and format are seriously flawed, the paper may be returned for revision before being sent to referees. If subject matter is inappropriate, the Editor may return the paper to the author with an explanatory letter.

The Editorial staff selects an AE who handles the initial review process. The manuscript

is assigned to at least 2 reviewers. All reviews are submitted electronically via AT. Reviewers' comments are sent to the AE, who usually takes 1 of 3 actions after assessing the manuscript and review comments: 1) the manuscript is forwarded to the EIC with a recommendation to publish without revision (extremely rare), 2) the manuscript is returned to the author with review comments and suggestions for revision, or 3) the manuscript is rejected.

Several revisions may be necessary before the AE recommends rejection or acceptance. Manuscripts returned to authors for revision must be resubmitted as a revision on AT within 6 months or the manuscript will be rejected, requiring resubmission as a new paper. Final acceptance or rejection of manuscripts is decided by the EIC. Typically, the EIC follows the AE's recommendation but this is not guaranteed.

Peer-Refereed Manuscripts

The Editorial office assigns peer-refereed manuscripts that have been accepted for review to an AE and 2 qualified referees to review the paper. They consider expertise, affiliation, geographic location, date of last review, and performance on previous reviews when selecting referees.

Referees are emailed and asked to complete their review within 3 weeks. Reviewers have immediate access to the manuscript once they accept the assignment. Reminder notices are sent on a regular basis until the review has been received. Despite these measures, it is sometimes necessary to replace delinquent reviewers. It may take >2 months before the AE receives a complete set of reviews.

Occasionally, the EIC or AE judges that a referee's comments reveal biases, lack objectivity, are illogical, or otherwise lack merit. In such cases the EIC or AE may ask for a manuscript revision despite negative comments from 1 or 2 referees. A second opinion from referees who recommended rejection also may be requested.

Manuscripts returned to authors for revision must be revised and returned to the AE within a reasonable deadline set by the AE or the manuscript will be withdrawn from the review process, requiring resubmission of the manuscript for further consideration. Once a completed revision is returned, the revised manuscript is reviewed again by the AE and either rejected or forwarded to the Editor with a recommendation to accept the manuscript for publication. The revision process often requires several iterations before the AE makes a final decision.

Acceptance and Rejection Policies

Final acceptance of manuscripts is decided by the EIC. The EIC bears final responsibility for the value and quality of materials that appear in *JWM* and makes decisions accordingly. These decisions may differ from referees' comments seen by authors and recommendations made by referees, including the AE. In rare instances, the EIC's decision to accept or reject a manuscript will not agree with the recommendation made by an AE.

In rendering a decision, the EIC evaluates the manuscript and comments of the review team. The following are some of the problems that typically result in rejection: 1) flaws in design or logic that make the results invalid, biased, or questionable; 2) failure to contribute new knowledge; 3) trivial subject matter; 4) previous publication of the same or closely related material; 5) subject matter of local rather than regional, national, or international interest; and 6) poor organization and presentation.

The author of a rejected manuscript may feel that referees' comments support publication and that the editorial decision was wrong. The author should realize that the EIC receives 2 sets of comments from each referee, one open and one confidential. The confidential evaluation may reveal weaknesses not mentioned in comments seen by the author. One referee may have discovered weaknesses missed by the other referees. Further, the EIC may identify problems

missed by both referees and the AE.

Appeal and resubmission.— The author may question the reasons for rejection by writing the EIC, stating his or her case, and asking for reconsideration. Reconsideration of a rejected manuscript requires a convincing rebuttal letter from the author(s). Authors should not revise and resubmit the manuscript without first writing a letter requesting reconsideration, which saves time for the EIC and the author.

Accepted manuscripts.—Once a manuscript is accepted, it enters the queue for publication and usually is printed in the next available issue. Accepted manuscripts go through 2 stages before publication: 1) final edit by *JWM* staff for content-related issues and general formatting and 2) copyediting and typesetting by the production staff. We will contact you during both stages. All correspondence is conducted via email, so please make sure the email address on your homepage is current at all times. Authors will be given a reasonable amount of time to respond. Delays in submitting revisions may result in the manuscript being carried over to a future issue or, even, rejected.

Page proofs.—The final production stages of the *The Wildlife Society* publications are handled at by Allen Press (Lawrence, Kans.). Page proofs of each paper are created by Allen Press and sent to each corresponding author. During the page proof stage, press deadlines are fast approaching and author corrections to page proofs are urgently needed, preferably within 48 hours of their receipt. Corrections should be e-mailed, faxed, phoned in, or sent by overnight or 2-day delivery, depending on how complicated they are. It is important that authors clearly communicate their recommended changes, mark proofs clearly, or describe changes in detail. Make only essential changes; in most cases authors must pay costs of substantive corrections to the final, approved manuscript.

ACKNOWLEDGMENTS

These guidelines have been compiled from previous version of *Journal of Wildlife Management* and *Wildlife Society Bulletin* guidelines and were compiled by the cooperative efforts of J. Wallace, R. Britton, T. Estabrook, and C. Johnson. We gratefully acknowledge the work of those previous authors that made this effort easier. We also thank our authors, reviewers, AEs, and EICs, past, present, and future.

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Note: Many citations that were used in the guidelines text as examples do not appear in the **LITERATURE CITED** section above.

Immediately below the **LITERATURE CITED** section type the following in italics:

Associate Editor:

APPENDIX A. ON-LINE MANUSCRIPT SUBMITTAL

We outline the basic steps of the online submission process in this Appendix. Before submitting manuscripts, please review the Unified Manuscript Guidelines and ensure that your manuscript is formatted accordingly. Manuscripts that seriously deviate from the requested format will be returned to authors, which could result in unnecessary delays. Submit manuscripts on the *Journal of Wildlife Management* AllenTrack (AT) website: http://jwm.allentrack.net/.

Logging in to Your AllenTrack Account

To create a new AT account or find out if you already have an account, go to the above-noted website, click "new authors should register for an account," and provide the requested information. If you forget your login name or password, click the "forgot my password" link on the AT mainpage, enter the requested information, and AT will email you your login name and a temporary password. If you do not receive the email from AT within a few hours, please contact the editorial office.

Your AllenTrack Homepage

Having successfully logged in to AT, you will be taken to your *JWM*. There, under "Author Tasks," you will see the following options: "Author instructions," "Submit presubmission inquiry," and "Submit manuscript." There also is a "General Tasks" heading with the options "Modify profile/password" and "logout." You can use this "General Tasks" link to update your profile (e.g., change your contact information, add or delete key words) and to modify your password. We encourage you to log in to your homepage to access all AT tasks (e.g., submitting a manuscript or review, checking the status of your manuscript). The links embedded in emails you receive from *JWM* are task-specific and, once that task has been completed, the links will no longer work. If you are reviewing a manuscript for the publication, there will also be links on your home page for that task.

Submitting your Manuscript

You will be taken through a series of 4 screens as you submit your manuscript:

1. The first screen is a form asking for author, title, abstract, and file quantities. You will be asked to enter corresponding author information first and contributing author information later. Do not enter the corresponding author information again as a contributing author. Recognizing that the corresponding author is not always the first author, you will be asked to select an order for each author entered. You will also be asked to provide email addresses for your co-authors. You will not be able to proceed without this information, so if a co-author does not have an email address, or if it is unavailable, make one up (e.g., unknown@unknown.com). On the first screen, you will be asked to enter the title, running head, and abstract. Reviewers do not see the submittal form, so you must include title, running head, and abstract in the manuscript as well. At the end of the first screen you will be asked to identify how many files will be uploaded (cover letter, article file,

color figure[s], black and white figure[s], tables, data sets, supplemental material, author pictures or supplemental pictures). You may "save and continue," "save and exit," or "cancel" at any time.

2. The second screen provides you with browser buttons to upload your file(s). The *JWM* accepts manuscripts in Word only. Tables must be submitted as part of the manuscript text file. Include tables immediately after **LITERATURE CITED**. Figures must be uploaded as separate files. Include figure titles at the end of the manuscript text file following **LITERATURE CITED** and tables. Multiple figures may be uploaded as individual files, but keep each figure on its own page. Keep table headings with the table. (The boxes that are provided in AT for table headings and figure captions are not transferred to the reviewer pdf files, so you must keep this information in the manuscript.) Once you have uploaded all files, click "submit" to submit the manuscript files. If you have multiple article files, you will be asked to order them so that a merged pdf file can be created for the reviewers.
3. The third screen is a completion screen that will provide you with a manuscript number for your submission (e.g., 2005-821). Please use this manuscript number in all correspondence. During this stage, all files will be converted to pdf format. This takes up to 30 minutes. If the conversion takes longer than 30 minutes, please contact the editorial office. Some common reasons that files do not convert properly include large files (i.e., GIS-related images), incompatible file formats (we only accept pdf, eps, jpeg, tiff, postscript, word, and power point), and embedded links. You can leave AT while the files convert and return to your manuscript at a later time. However, you do need to

review and approve the converted pdf files before they are forwarded to the editorial office.

4. The final screen allows you to verify that your manuscript was uploaded and converted correctly. You can make corrections at this stage (e.g., replace, delete, or rename a file). Once you approve the converted files, your manuscript is sent to the editorial office. The *JWM* editorial office will send you an email confirming that your submission has been received. If you do not receive an email within 2 days of submission, please contact the editorial office.

If you are asked to revise your manuscript, the corresponding email will contain a link to your manuscript in AT. Again, you can reach the manuscript by logging on as described above. You will not be required to re-enter the manuscript metadata. Instead, when ready, REPLACE and ADD files as necessary. Files that have not been edited and are to remain with the current manuscript version may be left as is (e.g., figure files). DELETE any files that are no longer part of the current version. AT saves a copy of the original submittal, and carrying old files forward may create confusion. Upload a cover letter with your revision that details how you responded to Associate Editor, EIC, and reviewer comments.

APPENDIX B. LITERATURE CITED

Type the **LITERATURE CITED** immediately following the text, not necessarily on a new page. Double-space **LITERATURE CITED** and use hanging indents for second and subsequent lines of a citation. Spell out all words in the **LITERATURE CITED** (i.e., do not use abbreviations). However, the following 3 exceptions are allowed in author and publisher locations: 1) Washington, D.C., 2) U.S. (e.g., U.S. Forest Service), and 3) USA. Alphabetize by

authors' surname(s), regardless of the number of multiple authors for the same publication. Within alphabetical order the sequence is chronological (e.g., Benton 1980, Benton 1991, Benton and Madison 1979).

Use sentence-case letters for all names in **LITERATURE CITED**, and place a comma between all names, even if there are only 2 (e.g., Schmidt, B. R, and J. Pellet). Use 2 initials (where appropriate) with 1 space between each initial. Only reverse the name order of the first author (e.g., Thogmartin, W. E., J. R. Sauer, and M. G. Knutson). For serial publications, show the issue number only if the pages of each issue are numbered separately. As in the text, spell out ordinal numbers (e.g., Third edition). Do not include words such as Publishing, Inc., or Company. Use the word Thesis to denote Master of Science (M.S.) or Master of Arts (M.A.), and use the word Dissertation for Doctor of Philosophy (Ph.D.). Do not write the total page number of books at the end of the citation. For foreign language publications, note the language of publication at the end of the citation in brackets (e.g., [In Spanish.]).

To document a file available for viewing and downloading via the World Wide Web, provide the following information: author's or organization's name (if known), date of publication or last revision, title of document, title of complete work (if relevant), URL, and date of access. Please review the following examples.

Book: General Format

McCullough, D. R. 1979. The George Reserve deer herd: population ecology of a K-selected species. University of Michigan, Ann Arbor, USA.

Miller, K. V., and L. Marchinton. 1995. Quality whitetails: the why and how of quality deer management. Stackpole, Mechanicsburg, Pennsylvania, USA.

Note: Do not write the total page number of books at the end of citations.

Book: More Than 1 Edition

Smith, R. L. 1974. Ecology and field biology. Second edition. Harper and Row, New York, New York, USA.

Book: More Than 1 Publisher

Sowls, L. K. 1955. Prairie ducks: a study of their behavior, ecology, and management. Stackpole, Harrisburg, Pennsylvania, and Wildlife Management Institute, Washington, D.C., USA.

Gutiérrez, R. J., A. B. Franklin, and W. S. LaHaye. 1995. Spotted owl (*Strix occidentalis*). Account 179 *in* A. Poole and F. Gill, editors. The birds of North America, The Academy of Natural Sciences, Philadelphia, Pennsylvania, and The American Ornithologists' Union, Washington, D.C., USA.

Book: More Than 1 Volume

Palmer, R. S. 1976. Handbook of North American birds. Volume 2. Yale University Press, New Haven, Connecticut, USA.

Book: Editor as Author

Temple, S. A., editor. 1978. Endangered birds: management techniques for preserving threatened species. University of Wisconsin Press, Madison, Wisconsin, USA.

Book: Reprint

Leopold, A. 1933. Game management. 1946, Reprint. Charles Scribner's Sons, New York, New York, USA.

Book: Chapter

Zeleny, L. 1978. Nesting box programs for bluebirds and other passerines. Pages 55–60 *in* S. A. Temple, editor. Endangered birds: management techniques for preserving threatened

species. University of Wisconsin Press, Madison, Wisconsin, USA.

Foreign Language Publication

Angulo, E. 2003. Factores que afectan a la distribución y abundancia del conejo en Andalucía. Dissertation, Complutense University, Madrid, Spain. [In Spanish.]

Government Publication

Lull, H. W. 1968. A forest atlas of the Northeast. U.S. Forest Service, Northeast Forest and Experiment Station, Upper Darby, Pennsylvania, USA.

Government Publication: Part of a Numbered Series

Anderson, D. R. 1975. Population ecology of the mallard: V. Temporal and geographic estimates of survival, recovery, and harvest rates. U.S. Fish and Wildlife Service Resource Publication 125, Washington, D.C., USA.

Government Publication: Agency as Author

National Research Council. 1977. Nutrient requirements of poultry. Seventh edition. National Academy of Science, Washington, D.C., USA.

Note: Cite in text as National Research Council (1977) or parenthetically as (National Research Council 1977). For additional examples, see the **LITERATURE CITED** section of this manuscript.

Journals: General Format

Miller, M. R. 1986. Molt chronology of northern pintails in California. Journal of Wildlife Management 50:57–64.

Steigers, W. D., Jr., and J. T. Flinders. 1980. A breakaway expandable collar for cervids. Journal of Mammalogy 61:150–152.

Note: Issue numbers are included only if the pages of each issue are numbered separately.

Journals in Press: Year and Volume Known

Zelenak, J. R., and J. J. Rotella. 1997. Nest success and productivity of ferruginous hawks in northern Montana. Canadian Journal of Zoology 75:in press.

Journals in Press: Year and Volume Unknown

Giudice, J. H., and J. T. Ratti. In press. Biodiversity of wetland ecosystems: review of status and knowledge gaps. Bioscience.

Multiple Citations of the Same Author(s)

Peek, J. M. 1963. Appraisal of a moose range in southwestern Montana. Journal of Range Management 16:227–231.

Peek, J. M. 1986. A review of wildlife management. Prentice-Hall, Englewood Cliffs, New Jersey, USA.

Peek, J. M., and A. L. Lovaas. 1968. Differential distribution of elk by sex and age on the Gallatin winter range, Montana. Journal of Wildlife Management 32:553–557.

Peek, J. M., A. L. Lovaas, and R. A. Rouse. 1967. Population changes within the Gallatin elk herd, 1932–1965. Journal of Wildlife Management 31:304-316.

Peek, J. M., and R. A. Rouse. 1966. Preliminary report on population changes within the Gallatin elk herd. Wildlife Science 82:1298–1316.

Note: fictitious citation used for example only.

Software Package

SAS Institute. 2001. Version 8.02. SAS Institute, Cary, North Carolina, USA.

Symposia and Proceedings: Complete Volume

DeGraaff, R. M., technical coordinator. 1978. Proceedings of workshop on management of southern forests for nongame birds. U.S. Forest Service General Technical Report SE-14,

Washington, D.C., USA.

Symposia and Proceedings: Individual Article

Dickson, J. G. 1978. Forest bird communities of the bottomland hardwoods. Pages 66–73 *in* R. M. DeGraaf, technical coordinator. Proceedings of workshop on management of southern forests for nongame birds. U.S. Forest Service General Technical Report SE-14, Washington, D.C., USA.

Symposia and Proceedings: Part of a Numbered Series

Palmer, T. K. 1976. Pest bird control in cattle feedlots: the integrated system approach. Proceedings of Vertebrate Pest Conference 7:17–21.

Symposia and Proceedings: Complete Volume (not part of a numbered series)

McAninch, J. B. 1995. Urban deer: a manageable resource? Proceedings of the symposium of the 55th Midwest Fish and Wildlife Conference. North Central Section of The Wildlife Society, 12–14 December 1993, St. Louis, Missouri, USA.

Note: Include dates and location with these citations.

Symposia and Proceedings: Individual Article (not part of a numbered series)

Stout, S. L., and R. Lawrence. 1996. Deer in Allegheny Plateau forests: learning the lessons of scale. Pages 92–98 *in* Proceedings of the 1995 Foresters Convention. Society of American Foresters, 28 October–1 November 1995, Portland, Maine, USA.

Note: Include dates and location with these citations.

Theses or Dissertations

Brelsford, M. A. 1991. Effects of grazing by wapiti on winter wheat and winter rapeseed, and the effects of simulated wapiti use on winter wheat in northern Idaho. Thesis, University of Idaho, Moscow, USA.

Tacha, T. C. 1981. Behavior and taxonomy of sandhill cranes from mid-continental North America. Dissertation, Oklahoma State University, Stillwater, USA.

Web Citation: Professional Site

Council of Biology Editors [CBE]. 1999. CBE home page. <http://www.council scienceeditors.org>. Accessed 7 Oct 1999.

Web Citation: Article in an Electronic Journal (ejournal)

Browning, T. 1997. Embedded visuals: student design in Web spaces. Kairos: A Journal for Teachers of Writing in Webbed Environments 3(1). <http://english.ttu.edu /kairos/ 2.1/features/browning/bridge.html>. Accessed 21 Oct 1997.

Web Citation: **Government Publication**

National Oceanic and Atmospheric Administration [NOAA]. 2005. National Weather Service internet services team. Monthly precipitation for Reno, Nevada. <http://www.wrh.noaa.gov/rev/ hydrology/monthly_precip.php>. Accessed 23 Aug 2005.

Newspaper, Newsletter, and Magazine Articles

Associated Press. 1997. Feathers could fly over dove hunting. Columbus Dispatch. 28 December 1997; section E:15.

Eisler, P., and J. T. Buckley. 1996. Voters to get a shot at hunting laws. USA Today. 25 April 1996; section A:4.

Hogan, M. 1997. Political season as important as hunting season. Safari Times 9(8):18.

Jones, D. M. 1997. Protecting animals at the ballot box. Mainstream, Animal Protection Institute. Spring:24–27.

Jones-Jolma, D. 1993. The fight to reform trapping in Arizona. The Animals' Agenda. March–

April:20–24.

Note: Citing from newspapers, newsletters, and magazines is discouraged and is only acceptable in certain rare circumstance (e.g., in papers dealing with public perceptions).

Court Cases

Cite complete title and year of case in text only.

APPENDIX C. ABBREVIATIONS COMMONLY USED IN TABLES, FIGURES, AND PARENTHETIC EXPRESSIONS

Only those metric units and their appropriate prefixes (CBE Style Manual Committee 1994) identified with an asterisk may be abbreviated in the text. A blank means do not abbreviate.

Term	Abbreviation or symbol	Term	Abbreviation or symbol
Adult	ad	Liter	L*
Amount	amt	Logarithm, base e	ln or $\log_e$
Approximately	approx.	Logarithm, base 10	$\log_{10}$
Average	$\bar{x}$	Male	M
Calorie	cal*	Maximum, minimum	max., min.
Celsius	C*	Meter[a]	m*
Chi-square	χ^2	Metric Ton	t
Coefficient	coeff.	Minute	min
Coefficient of		Month	
correlation, simple	r	Month names	Jan, Feb, etc.
multiple	R	More than/Greater than	>*
determination, simple	r^2	Number (of items)	No.
multiple	R^2	Observed	obs
variation	CV	Outside diameter	o.d.
Confidence interval	CI, $a \leq \bar{x} \leq a$	Parts per billion	ppb*

Confidence limits	CL, $x \pm a$	Parts per million	ppm*
Day	d	Percent	%*
Degrees of freedom	df	Population size	N
Diameter	diam	Probability	P
Diameter, breast height	dbh	Range	
Equation(s)	eq(s)	Sample size	n
Expected	exp	Second	sec
Experiment	exp.	Spearman rank correlation	r_s
Female	F	Square	sq
F ratio	F	Standard deviation (s)	SD
Gram	g*	Standard error ($s\_$)	SE
Gravity	g	Student's t	t
Hectare	ha*	Temperature	temp
Height	ht	Trace[b]	tr
Hotelling's T^2	T^2	Versus	vs.
Hour(s)	hr	Volt	V*
Inside diameter	i.d.	Volume: liquid, book	vol, Vol.
Joule	J*	Watt	W*
Juvenile	juv	Week	
Kilocalorie	kcal*	Weight	wt
Lethal concentration, 50%	LC_{50}	Wilcoxon test	T
Lethal dose, median	LD_{50}	Year(s)	yr
Less than	<*	Z-statistic	Z*

Limit	lim

[a]All standard meter-based measurement units can be abbreviated in text when they appear after a number (e.g., mm, cm, km, etc.)

[b]Define in a footnote (e.g., tr = <1%.)

Table 1. Common expressions with superfluous words[a]

Superfluous wording	Suggested substitute
the purpose of this study was to test the hypothesis	I (or we) hypothesized
in this study we assessed	we assessed
we demonstrated that there was a direct	we demonstrated direct
were responsible for	caused
played the role of	were
on the basis of evidence available to date	consequently
in order to provide a basis for comparing	to compare
as a result of	through, by
for the following reasons	because
during the course of this experiment	during the experiment
during the process of	during
during periods when	when
for the duration of the study	during the study
the nature of	(omit by rearrangement)
a large (or small or limited) number of	many (or few)
conspicuous numbers of	many
substantial quantities	much

a majority	most
a single	one
an individual taxon	a taxon

Table 1. Continued.

Superfluous wording	Suggested substitute
seedlings, irrespective of species	all seedlings
all of the species	all species
various lines of evidence	evidence
they do not themselves possess	they lack
were still present	persisted, survived
the analysis presented in this paper	our analysis
indicating the presence of	indicating
despite the presence of	despite
checked for the presence of	checked for
in the absence of	without
a series of observations	observations
may be the mechanism responsible for	may have caused
it is reasonable to assume that where light is not limiting	with light not limiting
in a single period of a few hours	in a few hours
occur in areas of North America	are in North America
adjacent transects were separated by at least 20 m	≥20 m apart

in the vicinity	nearby
separated by a maximum distance of 10 m and a minimum distance of 3 m	3–10 m apart

Table 1. Continued.

Superfluous wording	Suggested substitute
the present-day population	the population
their subsequent fate	their fate
whether or not	whether
summer months	summer
are not uncommon	may be
due to the fact that	(omit by rearrangement)
showed a tendency toward higher survival	had higher survival
devastated with drought-induced desiccation	killed by drought

[a]Mack (1986:33). Reprinted with permission from the Ecological Society of America.

Table 2. Words that commonly need correction in manuscripts.[a]

Word and proper usage
accuracy (see precision): extent of correctness of a measurement or statement.
affect (see effect): verb, to cause a change or an effect; to influence.
among (see between): use in comparing >2 things.
between (see among): use in comparing only 2 things.
cf.: compare
circadian: approximately 24 hours.
continual: going on in time with no, or with brief, interruption.
continuous: going on in time or space without interruption.
diurnal: recurring every 24 hours; occurring in daylight hours.
effect (see affect): usually a noun, the result of an action; as an adverb (rare), to bring about or cause to exist, or to perform.
e.g. (see i.e.): for example.
enable (see permit): to supply with means, knowledge, or opportunity; to make possible.
ensure (see insure): to make certain or guarantee.
farther: more distant in space, time, or relationship.
further: going beyond what exists, to move forward.
i.e. (see e.g.): that is.
incidence (see prevalence): number of cases developing per unit of population per unit of time.
insure (see ensure): to assure against loss.
livetrap: verb.
live trap: noun.

logistic: symbolic logic.

logistics: operational details of a project or activity.

mass (see weight): proper international use for measures of mass.

ovendry: adjective.

oven-dry: verb.

percent: adjective, adverb, or noun. Spell out only when the value is spelled out or when used as an adjective. Use "%" with numerals.

percentage: noun, part of a whole expressed in hundredths; often misused as an adjective, e.g., percent error, not percentage error.

permit (see enable): to allow, to give formal consent.

precision (see accuracy): degree of refinement with which a measurement is made or stated; e.g., the number 3.43 shows more precision than 3.4, but is not necessarily more accurate.

prevalence (see incidence): number of cases existing per unit of population at a given time.

sensu: as understood or defined by; used in taxonomic reference.

since: from some past time until present; not a synonym for "because" or "as."

presently: in the future, not synonymous with "at present" or "currently."

that (see which): pronoun introducing a restrictive clause (seldom immediately preceded by a comma).

usage: firmly established and generally accepted practice or procedure.

utilization, utilize: avoid by using "use" instead.

various: of different kinds.

varying: changing or causing to change. Do not use for different.

very: a vague qualitative term; avoid in scientific writing.

weight (see mass): should seldom be used.

viz: namely.

which (see that): pronoun introducing a nonrestrictive clause (often preceded by a comma or

preposition [for, in, or of which]); the word most often misused in *JWM* manuscripts.

while: during the time that. Use for time relationships but not as synonym for "whereas," "although," and "similarly," which do not imply time.

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[a]Adapted in part from CBE Style Manual Committee (1994:123–125); also see Day (1983:140–142).

Table 3. Format and style guidelines for tables accompanying manuscripts submitted to *Journal of Wildlife Management*.

Item	Style rule
Abbreviations	Use standard abbreviations.
Capitalization	Capitalize only the first letter for a column heading or phrase within a table.
Column heads	Required for each column. Do not submit tables with unlabeled columns.
Footnotes [a]	Use alphabetical superscripts, except for footnotes specifying probability levels.
Spacing	Double-space throughout, including title and footnotes.

[a] Indent the first line of a footnote 2 spaces. The remaining lines are flush with the left margin and double spaced. See **Tables** section above for sequence of footnotes.

Table 4. Example of correct format of tables accompanying manuscripts submitted to *Journal of Wildlife Management*.

	Animal group			
	Avian		Mammalian	
Site[a]	Insectivorous	Carnivorous	Insectivorous	Carnivorous
Xeric	5	3	2	4
Mesic	7	5	1	3
Hydric	12	7	5	8

[a]For footnotes, use lower-case, Roman letters. Indent the first line of the footnotes 2 spaces, and left-justify all run-on lines. Use asterisks for probability levels.